CBRFC DAMCAT field Information: Table 1: damcat_dams
"NID data, unchanging"

Field Name: nidid
Type: char(10)
Units: characters
Description: National Inventory of dams identification number.
Notes: Unique identifier for each dam

Field Name: dam_name
Type: char(45)
Units: characters
Description: Name of the dam
Notes:

Field Name: other_dam_name
Type: char(45)
Units: characters
Description: Other names used to refer to the same dam or reservoir as above
Notes:

Field Name: dam_former_name
Type: char(45)
Units: characters
Description: Any previous names for the dam.
Notes: multiple names separated with a semicolon ';'

Field Name: stateid
Type: integer
Units: numeric code
Description: state or federal identification number other than NIDID
Notes:

Field Name: section_t_r
Type: char(30)
Units: characters
Description: Section, Township, and Range location of the dam.
Notes:

Field Name: county
Type: char(30)
Units: characters
Description: County in which the dam is located.
Notes:

Field Name: river
Type: char(30)
Units: characters
Description: River or channel on which the dam is located.
Notes: When river is unnamed, field is listed as 'tr' – tributary to a named channel. When dam is not located on a channel, 'OS' indicates off stream location.

Field Name: owner_name
Type: char(45)
Units: characters
Description: Name of the dam's owner.
Notes:

Field Name: owner_type
Type: char(5)
Units: characters
Description: Code indicating type of owner
Notes: F for Federal, S for State, L for Local, U for Public utility, P for Private.

Field Name: dam_designer
Type: char(63)
Units: characters
Description: Name of the principal firms or agency completing the design of the dam.
Notes:

Field Name: private_on_federal
Type: char(5)
Units: characters
Description: Code indicating whether the dam is on federal property.
Notes: Y for yes, N for No.

Field Name: dam_type
Type: char(6)
Units: characters
Description: Code indicating the primary construction of dam.
Notes: RE for Earth fill, ER for Rock fill, PG for Gravity, CB for Buttress, VA for Arch, MV for Multiarch, CN for Concrete, MS for Masonry, St for Stone, TC for TimberCrib, OT for others.

Field Name: core
Type: char(5)
Units: characters
Description: Code indicating the position and type of watertight members.
Notes: F for upstream Facing, H for Homogeneous dam, I for Core, X for unlisted, A for bituminous Concrete, C for Concrete, E for Earth, M for Metal, P for Plastic, X for unlisted, K for known certainty, Z for estimated.

Field Name: foundation
Type: char(5)
Units: characters
Description: Code for material on which dam is constructed.
Notes: R for Rock, S for Soil, U for unlisted, K for known, Z for unlisted.

Field Name: purposes
Type: char(8)
Units: characters
Description: Code for indicating reservoir purposes.
Notes: I for irrigation, H for hydroelectric, C for flood control, N for navigation, S for water supply, R for recreation.

Field Name: year_completed
Type: integer
Units: date
Description: Year when main dam structure was completed.
Notes: **"0000"** indicates unknown year.

Field Name: year_modified
Type: integer
Units: date
Description: Year when main dam structure was modified.
Notes:

Field Name: downstream_hazard
Type: char(5)
Units: characters
Description: Code indicating hazard to downstream area resulting from dam failure.
Notes: L for low, S for significant, H for high.

Field Name: emergency_action_plan
Type: char(5)
Units: characters
Description: Code indicating whether an emergency action plan is in place in the event of a failure.
Notes: Y for Yes, N for no, NR for not required.

Field Name: inspection_date
Type: char(11)
Units: characters
Description: date of most recent inspection.
Notes:

Field Name: inspection_freq
Type: char(10)
Units: years
Description: Scheduled frequency interval for dam inspection
Notes:

Field Name: st_regulated_dam
Type: char(2)
Units: characters
Description: Code indicating whether the dam is regulated by the state.
Notes: Y for yes, N for no.

Field Name: st_reg_agency
Type: char(30)
Units: character
Description: state regulating agency
Notes:

Field Name: spillway_type
Type: char(5)
Units: character
Description: Type of spillways
Notes: C for Controlled, U for Uncontrolled, N for none.

Field Name: spillway_width
Type: integer
Units: feet
Description: width of the spillway
Notes:

Field Name: outlet_gates
Type: char(10)

Units: characters
Description: Code describing the type of spillway or outlet gates
Notes: X for none, U for uncontrolled, TR for tainter, L for vertical lift, R for roller, B for bascule, D for drum, N for needle, F for flap, S for slide, V for valve, O for other.

Field Name: volume_dam
Type: integer
Units: $yards^3$
Description: Total amount of material used in dam structure
Notes:

Field Name: number_locks
Type: char(10)
Units: characters
Description: Number of locks for the project
Notes:

Field Name: length_locks
Type: char(10)
Units: feet
Description: Length of primary locks
Notes:

Field Name: width_locks
Type: char(10)
Units: feet
Description: Width of primary locks.
Notes:

Field Name: fed_funding
Type: char(15)
Units: characters
Description: Code identifying if a federal agency was involved in funding the project.
Notes:

Field Name: fed_design
Type: char(15)
Units: characters
Description: Federal agency involved in design of project.
Notes:

Field Name: fed_construction
Type: char(15)
Units: characters

Description: Federal agency involved in construction of the project.
Notes:

Field Name: fed_regulatory
Type: char(15)
Units: characters
Description: Federal agency regulating the dam.
Notes:

Field Name: fed_inspection
Type: char(15)
Units: characters
Description: Federal Agency involved in the routine inspection of the dam
Notes:

Field Name: fed_operation
Type: char(15)
Units: characters
Description: Federal agency involved in the operation of the dam
Notes:

Field Name: fed_owner
Type: char(15)
Units: characters
Description: Federal agency that owns the dam
Notes:

Field Name: fed_other
Type: char(15)
Units: characters
Description: Other information pertaining to federal involvement.
Notes:

Field Name: source_agency
Type: char(10)
Units: characters
Description: Agency providing the data to NID file.
Notes:

Field Name: drainage_area
Type: float
Units: $miles^2$
Description: Drainage area above the dam.
Notes:

Field Name: topo_map
Type: char(22)
Units: characters
Description: Name of the 7 1/2 minute topographical map on which the dam is located.
Notes: from map_poly.tcl (CBRFC)

Field Name: hsa
Type: char(3)
Units: characters
Description: The Hydrologic Service area in which the dam is located.
Notes: from hsa_poly.tcl

Field Name: rfc
Type: char(5)
Units: characters
Description: The River Forecast Center in which the dam is located.
Notes:

Field Name: return_flow_region
Type: integer
Units: single number of region
Description: Flood region in which the dam is located.
Notes: Refer to USGS WRIR 94-4002 "Nationwide Summary of USGS Regional Regression Equations for Estimating Magnitude and Frequency of Floods for Ungaged Sites, 1993"

Field Name: longitude_dam
Type: float
Units: decimal degrees to 4 places.
Description: longitude of the dam
Notes:

Field Name: latitude_dam
Type: float
Units: decimal degrees
Description: latitude of the dam
Notes:

Field Name: dam_length
Type: integer
Units: feet
Description: Length of the dam, as defined as length along the top of the dam including all structures.
Notes:

Field Name: dam_height
Type: integer
Units: feet
Description: Vertical distance between lowest point on crest and lowest point on original stream bed.
Notes:

Field Name: structural_height
Type: integer
Units: feet
Description: Vertical distance from the lowest point of the crest to the lowest excavated point on the structure (foundation).
Notes:

Field Name: hydraulic_height
Type: integer
Units: feet
Description: Vertical distance between the maximum designed water level and lowest point on the original stream bed.
Notes:

Field Name: nid_height
Type: integer
Units: feet
Description: Maximum value from the above three fields.
Notes:

Field Name: max_discharge
Type: integer
Units: cfs
Description: Flow through the Spillway when the reservoir is at maximum storage level.
Notes:

Field Name: max_storage
Type: integer
Units: acre-feet
Description: Stored volume in reservoir when the reservoir is full.
Notes:

Field Name: normal_storage
Type: integer
Units: acre-feet
Description: Total space in the reservoir below the storage retention level.
Notes:

Field Name: nid_storage
Type: integer
Units: acre-feet
Description: Maximum value of the previous two columns.
Notes:

Field Name: sa
Type: integer
Units: acres
Description: Surface area of the reservoir at capacity.
Notes:

Field Name: elev
Type: float
Units: feet above mean sea level
Description: Elevation of the dam, calculated from longitude and latitude.
Notes:

Field Name: prebreak_avail
Type: char(1)
Units: characters
Description: Code indicating if prebreak is available in the office.
Notes: RFC specific in-house

Field Name: update
Type: date
Units: date
Description: date of last record modification.
Notes:

CBRFC DAMCAT field Information: Table 2: damcat_in
"Starting model values"

Field Name: nidid
Type: char(10)
Units: characters
Description: National Inventory of dams identification number.
Notes: Unique identifier for each dam

Field Name: src
Type: char(3)
Units: characters
Description: Code indicating the source of the model run (i.e. the office populating the input table.)
Notes: Presently, the office identifier is the preferred code (i.e. STR for the CBRFC, PRT for NWRFC, etc.)

Field Name: scenario
Type: char(2)
Units: characters
Description: Code indicating starting water elevation (H, M, L for High, Middle and Low, respectively) and failure rate (F, N, S for Fast, Normal and Slow, respectively.)
Notes:

Field Name: hde
Type: float
Units: feet
Description: Starting water elevation in feet above mean sea level.
Notes:

Field Name: bme
Type: float
Units: feet
Description: Bottom of breach in feet above mean sea level
Notes:

Field Name: vol
Type: float
Units: acre-feet
Description: Volume of reservoir.
Notes:

Field Name: sa
Type: float
Units: acres
Description: Surface area of reservoir
Notes:

Field Name: tfm
Type: float
Units: minutes
Description: time to failure
Notes:

Field Name: qo
Type: float
Units: cfs
Description: non-breach flow
Notes:

Field Name: bw
Type: float
Units: feet
Description: Final breach width
Notes:

Field Name: Comments
Type: char(30)
Units: characters
Description: Comments necessary for the above record.
Notes:

CBRFC DAMCAT field Information: Table 3: damcat_down
"Downstream Information"

Field Name: nidid
Type: char(10)
Units: characters
Description: National Inventory of dams identification number.
Notes: Unique identifier for each dam

Field Name: src
Type: char(3)
Units: characters
Description: Code indicating the source of the model run (i.e. the office populating the input table.)
Notes: Presently, the office identifier is the preferred code (i.e. STR for the CBRFC, PRT for NWRFC, etc.)

Field Name: down_num
Type: integer
Units: integer
Description: The relative order of the forecast point from the dam. Dam site is '0.' Subsequent sites are numbered 1,2,3 etc.
Notes:

Field Name: xsec_type
Type: char(2)
Units: characters
Description: Type of cross section used
Notes: In CBRFC version, 'C' refers to CBRFC's cross section method (involving 10 year flood relations) 'O' refers to the OH method.

Field Name: name
Type: char(45)
Units: characters
Description: Name or description of the forecast point.
Notes:

Field Name: Longitude
Type: float
Units: decimal degrees
Description: The correct longitude of the forecast point.
Notes: To ensure proper elevation data when using 10 meter DEM, use at least 4 decimal places of accuracy. A 7.5 topographic map will greatly aid the user.

Field Name: Latitude
Type: float
Units: decimal degrees
Description: The correct latitude of the forecast point.
Notes: To ensure proper elevation data when using 10 meter DEM, use at least 4 decimal places of accuracy. A 7.5 topographic map will greatly aid the user.

Field Name: Elevation
Type: float
Units: feet above mean sea level (MSL)
Description: The elevation of the river channel at the forecast point.
Notes: Again, care should be taken to ensure that the proper elevation is entered into the input file. The Simplified dambreak model requires this value to develop the channel slope.

Field Name: Distance_from_dam
Type: float
Units: miles
Description: The distance from the dam along the river channel.
Notes: Distance must be measured along the channel as a straight line (or"as the crow flies"), which often underestimates the true channel distance.

Field Name: flood_flow
Type: float
Units: cfs
Description: The estimated river flow at flood stage.
Notes: For the CBRFC region, we chose to use the 10 year flood flow obtained from WRIR 94-4002 "Nationwide Summary of U.S. Geological Survey Regional Regression Equations for Estimating Magnitude and Frequency of Floods for Ungaged Sites, 1993" [M.E. Jennings, W.O. Thomas, Jr. and H.C. Riggs.]

Field Name: flood_depth
Type: float
Units: feet
Description: Estimated flood depth from a non-dam failure flood event.
Notes:

Field Name: Flood_width
Type: float
Units: feet
Description: The estimated width of flood stage.
Notes:

Field Name: mann_oc
Type: float
Units: none
Description: The estimated off channel manning's n at the forecast point.
Notes:

Field Name: update
Type: time & date
Units: date
Description: Time and date of the creation of the table entry.
Notes: Dambatch.tcl handles this automatically.

CBRFC DAMCAT field Information: Table 4: damcat_pair
"Cross Sections (elev/top width pairs)"

Field Name: nidid
Type: char(10)
Units: characters
Description: National Inventory of dams identification number.
Notes: Unique identifier for each dam

Field Name: src
Type: char(3)
Units: characters
Description: Code indicating the source of the model run (i.e. the office populating the input table.)
Notes: Presently, the office identifier is the preferred code (i.e. STR for the CBRFC, PRT for NWRFC, etc.)

Field Name: down_num
Type: integer
Units: integer
Description: The relative order of the forecast point from the dam. Dam site is '0.' Subsequent sites are numbered 1,2,3 etc.
Notes:

Field Name: pair_num
Type: integer
Units: integer
Description: The pair number for the forecast point. '0' is the first pair, and the lowest in the channel. Subsequent pairs numbered 1,2,3 etc.
Notes:

Field Name: xsec_type
Type: char(2)
Units: characters
Description: Type of cross section used
Notes: In CBRFC version, 'C' refers to CBRFC's cross section method (involving 10 year flood relations) 'O' refers to the OH method.

Field Name: elev
Type: float
Units: feet above mean sea level.
Description: elevation of the pair above mean sea level.
Notes:

Field Name: tw
Type: float
Units: feet
Description: Top width of the pair
Notes:

Field Name: mann_n
Type: float
Units: none, manning n
Description: manning's n of the river channel at the given elevation
Notes:

Field Name: inactive_width
Type: float
Units: feet
Description: inactive portion of the pair.
Notes:

CBRFC DAMCAR field Information: Table 5: damcat_out
"Model Outputs"

Field Name: nidid
Type: char(10)
Units: characters
Description: National Inventory of dams identification number.
Notes: Unique identifier for each dam

Field Name: src
Type: char(3)
Units: characters
Description: Code indicating the source of the model run (i.e. the office populating the input table.)
Notes: Presently, the office identifier is the preferred code (i.e. STR for the CBRFC, PRT for NWRFC, etc.)

Field Name: scenario
Type: char(2)
Units: characters
Description: Code indicating starting water elevation (H, M, L for High, Middle and Low, respectively) and failure rate (F, N, S for Fast, Normal and Slow, respectively.)
Notes:

Field Name: down_num
Type: integer
Units: integer
Description: The relative order of the forecast point from the dam. Dam site is '0.' Subsequent sites are numbered 1,2,3 etc.
Notes:

Field Name: xsec_type
Type: char(2)
Units: characters
Description: Type of cross section used
Notes: In CBRFC version, 'C' refers to CBRFC's cross section method (involving 10 year flood relations) 'O' refers to the OH method.

Field Name: slope
Type: float
Units: feet/mile
Description: Slope of the river channel from the dam to the forecast point
Notes:

Field Name: max_flow
Type: float
Units: cfs
Description: maximum flow at the given forecast point
Notes:

Field Name: max_depth
Type: float
Units: cfs
Description: Maximum depth at the given forecast point.
Notes:

Field Name: time_max_depth
Type: float
Units: hours
Description: time for flood to reach maximum depth at the given forecast point.
Notes:

Field Name: time_flood
Type: float
Units: hours
Description: time for flow to reach the flood level.
Notes:

Field Name: time_deflood
Type: float
Units: hours
Description: time required for flow to drop below flood level.
Notes:

Field Name: Comments
Type: char(30)
Units: characters
Description: Comments necessary for the above record.
Notes:

Field Name: update
Type: date
Units: date
Description: date of last record modification.
Notes:

CBRFC DAMCAR field Information: Table 6: damcat_out
"Spillway and Storage Capacity"

Field Name: nidid
Type: char(10)
Units: characters
Description: National Inventory of dams identification number.
Notes: Unique identifier for each dam

Field Name: type
Type: char(1)
Units: 'S' for Spillway or 'C' for Capacity
Description: Indication of capacity or discharge information.
Notes: To be used when running FloodWav or large dambreak model.

Field Name: elevation
Type: float
Units: feet (MSL)
Description: Elevation of the water surface for the given capacity/discharge.
Notes:

Field Name: stordis
Type: float
Units: Acre feet for 'C' (Capacity) or cfs for 'S' (Spillway.)
Description: Reservoir capacity or discharge from the spillway at the given elevation.
Notes:

Field Name: surface
Type: float
Units: acre
Description: Reservoir surface area for 'C' (Capacity) or set to '-1' for Spillway tables.
Notes: